What is claimed is:

1. An expression system comprising a polynucleotide capable of producing a HSCLOCK polypeptide comprising an amino acid sequence, which has at least 80% identity with the polypeptide of SEQ ID NO:2 when said expression system is present in a compatible host cell.

2. A process for producing a recombinant host cell comprising transforming or transfecting a cell with the expression system of claim 2 such the the host cell, under appropriate culture conditions, produces a polypeptide comprising an amino acid sequence having at least 80% identity to the amino acid sequence of SEQ ID NO:2 over the entire length of SEQ ID NO:2.

3. A recombinant host cell produced by the process of claim 2.

4. A membrane of a recombinant host cell of claim 3 expressing a polypeptide comprising an amino acid sequence having at least 80% identity to the amino acid sequence of SEQ ID NO:2 over the entire length of SEQ ID NO:2.

5. A process for producing a polypeptide comprising culturing a host cell of claim 3 under conditions sufficient for the production of said polypeptide and recovering the polypeptide from the culture.

6. An antibody immunospecific for the HSCLOCK polypeptide.

7. A method for the treatment of a subject:

(i) in need of enhanced activity or expression of the HSCLOCK polypeptide comprising:

(a) administering to the subject a therapeutically effective amount of an agonist to said polypeptide; and/or

(b) providing to the subject an isolated polynucleotide comprising a nucleotide sequence encoding said polypetide in a form so as to effect production of said polypeptide activity *in vivo*.; or

(ii) having need to inhibit activity or expression of the polypeptide comprising:

(a) administering to the subject a therapeutically effective amount of an antagonist to said polypeptide; and/or

(b) administering to the subject a nucleic acid molecule that inhibits the expression of a nucleotide sequence encoding said polypeptide; and/or

(c) administering to the subject a therapeutically effective amount of a polypeptide that competes with said polypeptide for its ligand, substrate, or receptor.

8. A process for diagnosing a disease or a susceptibility to a disease in a subject related to expression or activity of the HSCLOCK polypeptide in a subject comprising:

(a) determining the presence or absence of a mutation in the nucleotide sequence encoding said polypeptide in the genome of said subject; and/or

(b) analyzing for the presence or amount of said polypeptide expression in a sample derived from said subject.

9. A method for screening to identify compounds which stimulate or which inhibit the function of the HSCLOCK polypeptide which comprises a method selected from the group consisting of:

(a) measuring the binding of a candidate compound to the polypeptide (or to the cells or membranes bearing the polypeptide) or a fusion protein thereof by means of a label directly or indirectly associated with the candidate compound;

(b) measuring the binding of a candidate compound to the polypeptide (or to the cells or membranes bearing the polypeptide) or a fusion protein thereof in the presense of a labeled competitior;

(c) testing whether the candidate compound results in a signal generated by activation or inhibition of the polypeptide, using detection systems appropriate to the cells or cell membranes bearing the polypeptide;

(d) mixing a candidate compound with a solution containing a HSCLOCK polypeptide, to form a mixture, measuring activity of the polypeptide in the mixture, and comparing the activity of the mixture to a standard; or

(e) detecting the effect of a candidate compound on the production of mRNA encoding said polypeptide and said polypeptide in cells, using for instance, an ELISA assay.

10. An agonist or an antagonist of the HSCLOCK polypeptide.

add a2